

REMARKS

I. Formalities

Applicant thanks the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119, and receipt of the certified copy of the priority document submitted on February 12, 2004.

II. Status of the Application

By the present amendment, claims 1, 3 and 5 have been amended. In addition, claim 2 is hereby canceled without prejudice or disclaimer. Claims 1 and 3-8 are all the claims pending in the Application, with claims 1 and 6 being in independent form. Claims 1-8 have been rejected.

The present amendment addresses each point of objection and rejection raised by the Examiner. Favorable reconsideration is respectfully requested.

III. Objections to the Drawings

The Examiner has objected to the drawings filed on February 23, 2001, alleging that Figures 5A and 5B are not clear and are not well reproduced upon scanning. Accordingly, Applicant has submitted herewith two (2) sheets of Replacement Drawings for Figures 5A and 5B, which are larger in size and which present the features therein more clearly so that they will be well reproduced upon scanning.

Therefore, since the informalities noted by the Examiner have been corrected, Applicant respectfully requests that the Examiner acknowledge and approve the aforementioned drawings.

IV. Claim Rejections under 35 U.S.C. § 112

The Examiner has rejected claims 2-3 and 5 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, the Examiner alleges that there is a lack of antecedent basis for the keystone vector as recited in claims 2 and 5.

As an initial matter, since claim 2 has been canceled without prejudice of disclaimer, the Examiner's objections with respect to claim 2 are now moot.

With respect to claim 5, the informalities noted by the Examiner have been corrected, as set forth above. Thus, withdrawal of this objection is respectfully requested.

The Examiner has also objected to claims 2 and 5, alleging that "a keystone vector," as recited in claims 2 and 5 is not defined. Applicant respectfully traverses the Examiner's objections in this regard, and submits that "a keystone vector" as recited in claims 2 and 5 is clearly defined, for instance, on page 1, paragraph 02 of the present specification. Indeed, the present specification makes it explicitly clear that "the keystone phenomenon refers to a phenomenon transforming an original shape on a projection surface due to the magnitude of the incident angle." (Page 1, paragraph 02).

Therefore, in light of the description of the keystone phenomenon in the present specification, Applicant submits that one of ordinary skill in the art would understand that the keystone phenomenon refers to one of the distortions of a projected image. Moreover, Applicant submits that one of ordinary skill would also understand that the term "a keystone vector," as recited in claims 2 and 5, refers to a vector that represents a distorted angle of a projected image. Accordingly, Applicant submits that the Examiner's allegation that "a keystone vector," as

recited in claims 2 and 5, is not defined, is unsupported by the specification and is contrary to the understanding possessed by those with ordinary skill in the art at the time of the present invention. Thus, Applicant respectfully requests that the Examiner withdraw the objections with respect to claims 2 and 5 for *at least* these reasons.

Finally, the Examiner has objected to claim 5, alleging that it is unclear how a direction may be vertical to another direction, as recited in claim 5. Claim 5 has been amended, as set forth above, to more clearly recite “a direction ~~vertical~~ perpendicular to the pivotal axes of the reflectors.” Accordingly, Applicant respectfully requests that the Examiner withdraw this objection.

V. Claim Rejections under 35 U.S.C. § 102

The Examiner has rejected claims 1-8 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,419,365 to Potekev, et al. (hereinafter “Potekev”). Applicant respectfully traverses this rejection for *at least* the independent reasons stated below.

As an initial matter, Applicant notes that claim 2 has been canceled without prejudice or disclaimer. Therefore, the Examiner’s rejection with respect to claim 2 is now moot.

Further, according to the MPEP, “a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” (MPEP § 2131). Applicant respectfully submits that claims 1 and 3-8 positively recite limitations which are not disclosed (or suggested) by Potekev.

A. Independent Claim 1

For instance, independent claim 1 recites (among other things):

...a light integrator disposed between the light source and the image-forming panel...

...wherein the light integrator reduces the shape of the cross-sectional face of the light incident from the light source and radiated onto the image-forming panel at a certain incident angle in proportion to $\cos \theta$ with respect to the original shape of the cross-sectional face of the light in the direction of a keystone vector formed on the image-forming panel, when the incident angle of the light incident onto the image-forming panel is θ .

The grounds of rejection allege that the asymmetrical light integrating tunnel 92, as disclosed in Potekev, corresponds to “a light integrator,” as recited in claim 1. Applicant respectfully disagrees with the grounds of rejection.

Potekev does not disclose or suggest the feature of a light integrator that reduces the shape of the cross-sectional face of the light incident from a light source and radiated onto an image-forming panel at a certain incident angle in proportion to $\cos \theta$ with respect to the original shape of the cross-sectional face of the light in the direction of a keystone vector formed on the image-forming panel, when the incident angle of the light incident onto the image-forming panel is θ , as recited in claim 1.

In contrast to the requirements of claim 1, Potekev discloses an asymmetrical light integrating tunnel 92 which spatially integrates the filtered light entering rectangular aperture 70 into a more spatially uniform pattern as it exits nonrectangular output aperture 94. (Column 5, lines 40-50; Figure 5). More particularly, Potekev discloses that the image of nonrectangular output aperture 94 on digital micro mirror device (“DMD”) 50 is intentionally distorted to

compensate for any Keystone distortion illumination overfill regions, and illumination drop-off regions, thereby preventing light loss, increasing brightness, and brightness uniformity across DMD 50. (Column 5, lines 59-64).

However, Potekev provides no disclosure or suggestion whatsoever that the asymmetrical light integrating tunnel 92 reduces the shape of the cross-sectional face of the light incident from the light source 32, and radiated onto the DMD 50, at a certain incident angle in proportion to $\cos \theta$ with respect to the original shape of the cross-sectional face of the light in the direction of a keystone vector formed on the DMD 50, when the incident angle of the light incident onto the DMD 50 is θ .

Indeed, while Figure 5 of Potekev (which is relied upon by the grounds of rejection) may show a resulting uniform light pattern imaged on obliquely mounted DMD 50, the grounds of rejection do not point to any specific portion of Figure 5 that discloses or suggests that the asymmetrical light integrating tunnel 92 reduces the shape of the cross-sectional face of the light incident from the light source 32, and radiated onto the DMD 50, at a certain incident angle in proportion to $\cos \theta$ with respect to the original shape of the cross-sectional face of the light in the direction of a keystone vector formed on the DMD 50, as required by claim 1.

As a result, Applicant respectfully submits that independent claim 1 is not anticipated by (i.e. is not readable on) the applied Potekev reference for *at least* these independent reasons. Further, Applicant respectfully submits that the dependent claims 3-5 and 7-8 are allowable *at least* by virtue of their dependency on claim 1. Thus, Applicant respectfully requests that the Examiner withdraw this rejection.

B. Independent Claim 6

Independent claim 6 recites (among other things):

...receiving the collected light, transforming a cross-sectional face of the incident light into a predefined desired shape, and emitting the light onto the image-forming panel, wherein the cross-sectional face of the light is transformed by reduction in proportion to $\cos \theta$ with respect to the direction of the keystone vector formed on the image-forming panel, when the incident angle of the light incident onto the image-forming panel is θ ...

In view of the similarity between these requirements and the requirements discussed above with respect to independent claim 1, Applicant respectfully submits that the foregoing arguments as to the patentability of independent claim 1 apply *at least* by analogy to claim 6. As such, it is respectfully submitted that claim 6 is patentably distinguishable over the cited Potekev reference *at least* for reasons analogous to those presented above. Thus, the allowance of claim 6 is respectfully solicited of the Examiner.

VI. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/776,598

Attorney Docket No. Q77889

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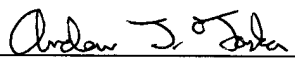
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AMENDMENTS TO THE DRAWINGS

The Examiner has objected to the drawings filed on February 23, 2001, alleging that Figures 5A and 5B are not clear and are not well reproduced upon scanning. Accordingly, Applicant has submitted herewith two (2) sheets of Replacement Drawings for Figures 5A and 5B. The attached replacement sheets of drawings include the following changes:

In Figure 5A, the view showing through simulation the shape of the light radiated on the digital mirror device panel according to the related art is larger in size and the features therein are presented more clearly so that they will be well reproduced upon scanning.

In Figure 5B, the view showing through simulation the shape of the light radiated onto the digital mirror device panel consistent with an illustrative and non-limiting embodiment of the present invention art is larger in size and the features therein are presented more clearly so that they will be well reproduced upon scanning.

Accordingly, the informalities noted by the Examiner have been corrected and, therefore, Applicant respectfully requests that the Examiner acknowledge and approve the aforementioned drawings.

Attachment: Two (2) Replacement Sheets
(Figures 5A and 5B)